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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,775	11/06/2006	Jonathan Rogers	ELI2-22880/A/PCT	7722
324	7590	09/10/2009	EXAMINER	
JoAnn Villamizar Ciba Corporation/Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591			FANG, SHANE	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			09/10/2009	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/553,775

**Applicant(s)**

ROGERS ET AL.

**Examiner**

SHANE FANG

**Art Unit**

1796

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12, 14-17, 19 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 and 14-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-12, 17 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date 10/28/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The X references listed on ISP are not anticipatory due to the cancellation of claim 13 and withdrawn of claim 1.

#### ***Election/Restrictions***

The applicant has elected Group II (claims 5-6) with traverse responding to previous action, but no argument has been submitted. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The applicant has changed the dependence of claims 7-12 and 17 to claim 5 and added new claim 19 depending on claim 5. The examiner agrees to rejoin claims 7-12, 17 and 19 with Group II (claims 5-6) for examination.

This restriction is made FINAL. See previous action for the reasons of applying restriction.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5-12, 17 and 19 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since

the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

In the present instance, claim 5 (recites the broad recitation "R<sup>19</sup> and R<sup>20</sup> form a ring", and the claim also recites "R<sup>19</sup> and R<sup>20</sup> together form a group of formula =CR<sup>100</sup>R<sup>101</sup>", which is the narrower statement of the range/limitation due to R<sup>19</sup> and R<sup>20</sup> being at the 1, 2 positions of biphenyl methane (2<sup>nd</sup> formula from left on the third row). Claim 6 recites the broad recitation "R<sup>19</sup> and R<sup>20</sup> are...C<sub>1</sub>-C<sub>18</sub> alkyl", and the claim also recites "R<sup>19</sup> and R<sup>20</sup> are especially C<sub>4</sub>-C<sub>12</sub> alkyl ", which is the narrower statement of the range/limitation. For examination purpose, the boarder limitations are considered based on the principle of broadest interpretation of claims.

### ***Claim Rejections - 35 USC § 102***

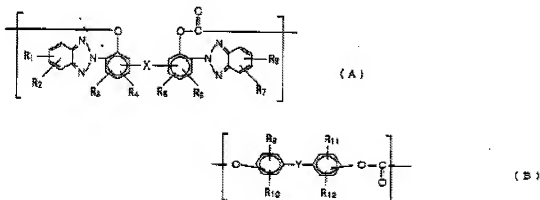
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 5-6 and 19 rejected under 35 U.S.C. 102(b) as being anticipated by Ogawa et al. (JP 08311193, machine translation is used as English equivalent).

As to claim 5-6 and 19, Ogawa et al. discloses copolycarbonate polymer composed of units (A) and (B) in the following generic structure (Abs. claim 1):



wherein R<sub>1</sub>-R<sub>8</sub> can be H and X can be CH<sub>2</sub>, meeting formula (I) of instant claim 1 and formula (Ia) of instant claim 19; R<sub>1</sub>-R<sub>8</sub> can be H and Y can be CH<sub>2</sub>, meeting the formula on Pg. 6, 2<sup>nd</sup> column, 2<sup>nd</sup> row of instant claim 5 and formula on Pg. 8, 1<sup>st</sup> column, 4<sup>th</sup> row of instant claim 6.

5. Claim 5-7, 10-12, and 19 rejected under 35 U.S.C. 102(b) as being anticipated by Woo et al. (US 6512083).

Woo et al. discloses polymer having moieties of 9, 9' substituted fluorene and at least one monomer groups such as benzene and benzotriazole (claim 1 and 8). One of ordinary skill in the art would at once envisage selecting benzene and benzotriazole

(meets formula (I) of instant claims 5 and 19) and 9, 9' methyl fluorene (meets formula (I) of instant claim 5-6). Woo et al. discloses the fluorene unit is at least 10 (claim 1). One of ordinary skill in the art would at once envisage selecting a polymer with 10 fluorene units, 1 benzene unit, and 1 benzotriazole unit, resulting in a polymer with 91 mol% of fluorene units that meets instant claim 7.

Woo et al. fails to disclose an exemplary polymer to meet instant claim 5-7 and 9. However, a genus may be so small that, when considered in light of the totality of the circumstances, it would anticipate the claimed species or subgenus. For example, it has been held that a prior art genus containing only 20 compounds and a limited number of variations in the generic chemical formula inherently anticipated a claimed species within the genus because "one skilled in [the] art would... envisage each member " of the genus. **In re Petering**, 301 F.2d 676, 681, 133 USPQ 275, 280 (CCPA 1962).

As to claims 10-12, Woo et al. discloses an electroluminescent device comprising substrates and light-emitting polymer such as poly(fluorene-benzotriazole-benzene) (claim 1 and 8) between anode and cathode (21: 50-55). The anode is transmissive ITO (20:25-27), and the cathode is inherently reflective metal layer (21: 40-45).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5-7, 9-12, and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Woo et al. (US 6512083).

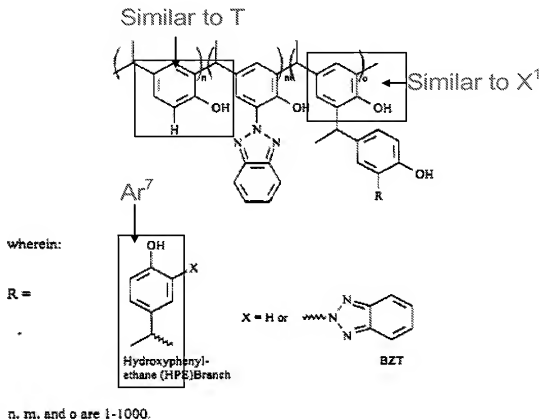
Disclosure of Woo et al. is adequately set forth in ¶6 and is incorporated herein by reference.

Woo et al. discloses a generic polymer that embraces a species meeting instant claims 5-7, 10-12 and 19. Although many species are disclosed in the reference and therefore anticipation does not appear to be present, it has been held that the mere fact that a reference suggests a multitude of possible combinations does not in and of itself make any one of these combination less obvious (**Merck & Co. v. Biocraft Laboratories**, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir. 1989). Therefore, it would have been obvious to one having ordinary skill in the art to obviously recognize to prepare claimed poly(fluorene-benzotriazole-benezne) and optical devices thereof.

As to instant claim 9, Woo et al. discloses a polymer having a species with 100mol% 9,9'-methyl fluorene unit (2:30-65, 3:1-10). The disclosed mol% is close to claimed range of T unit in the copolymer (up to 99.5 mol%, Pg. 11, line 2). A prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. **Titanium Metals Corp. of America v. Banner**, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

8. Claim 5-6, 8 and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Dillion et al. (WO 97/12882) listed on IDS and ISP.

As to claims 8 and 17, Dillion et al. discloses a copolymer having the following structure similarly identical to claimed invention (claim 1):



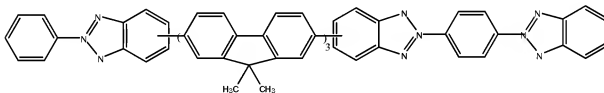
As indicated by the above structure, the only difference is the pendant OH groups. The instant [0047] excludes the disclosed structure with pendant OH groups but shows no unexpected results via eliminating the hydroxyl groups. In light of this, the similarity between the chemical structures and expected properties is sufficiently close that one of ordinary skill in the art would have been motivated to make the claimed



copolymer. **In re Payne**, 606 F.2d 303, 203 USPQ 245 (CCPA 1979); **In re Dillon**, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir.1991). See MPEP § 2144.09.

9. Claim 5-7, 10-12, and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers et al. (US 20050175856, filing date 06/06/2002).

Rogers et al. discloses generic polymer that embraces a species meeting instant claims 5-7 and 19 having the following structure (claim 1):



The 9, 9-substituted fluorene unit mol% falls within the claimed range (0-99.5%) recited in instant claim 7. Although many species are disclosed in the reference and therefore anticipation does not appear to be present, it has been held that the mere fact that a reference suggests a multitude of possible combinations does not in and of itself make any one of these combination less obvious (**Merck & Co. v. Biocraft Laboratories**, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir. 1989). Therefore, it would have been obvious to one having ordinary skill in the art to obviously recognize to prepare claimed poly(fluorene-benzotriazole-benzene).

As to instant claims 10-12, Rogers et al. discloses the claimed light emitting polymer between electrodes in an electroluminescent device (claim 1) comprising substrates and anode and cathode, wherein the anode is inherently transmissive ITO and the cathode is inherently reflective LiF/Al layer ([0346-0352]).

### ***Claim Rejections - Double Patenting***

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 5-7, 10-11, and 19 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 of copending Application No. 10/517411. This is a non-provisional obviousness-type double patenting rejection because the conflicting claims have in fact recently been allowed.

Claim 1 of 10/517411 meets instant claims 5-7, 10-11, and 19, as shown in the above ¶ 10.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHANE FANG whose telephone number is (571)270-7378. The examiner can normally be reached on Mon.-Thurs. 8 a.m. to 6:30 p.m. EST.. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sf

/Randy Gulakowski/  
Supervisory Patent Examiner, Art Unit 1796